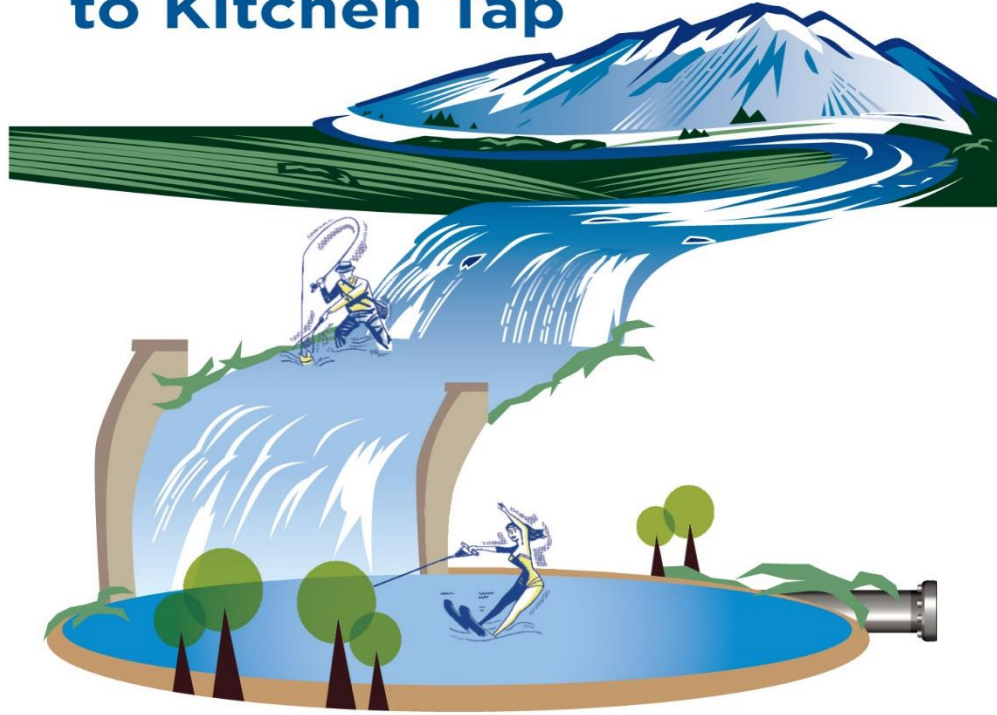


# Infrastructure Needs

Tage I. Flint, PE

Weber Basin Water Conservancy District

# From Mountain Top to Kitchen Tap



There are 756 dams in Utah that are regulated by a state or federal agency.

# Roles in Water Systems

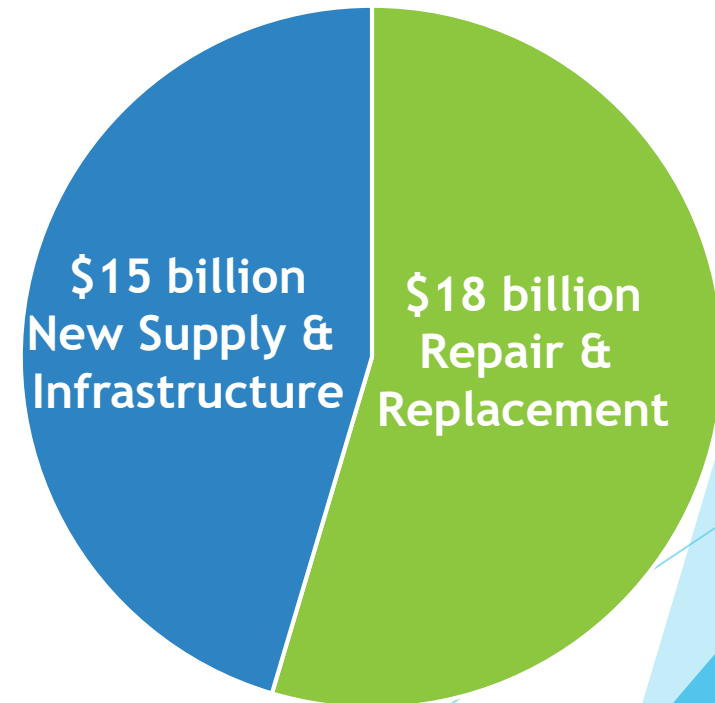
- ▶ Federal: Primarily played a financing role in the past, but funding is dwindling
- ▶ State: Primarily played a planning and regulatory role; must help fill financing gap
- ▶ Local: Principal funder and primary interface of water systems for end users

# Long-term Planning

Statewide Water Infrastructure Plan (SWIP) Identifies municipal and industrial water supply needs of cities, counties, districts and state for the next 50 years

**\$33 billion  
statewide  
by 2060**

**=**



# Repair & Replacement

- ▶ Costs much more than original infrastructure
  - ▶ Economies of scale
  - ▶ Development encroachment
- ▶ Upgrades of WTPs often provide no new capacity
- ▶ Major project infrastructure built at same time



# Financing

## Essential Water Funding Tools



**WATER  
RATES**



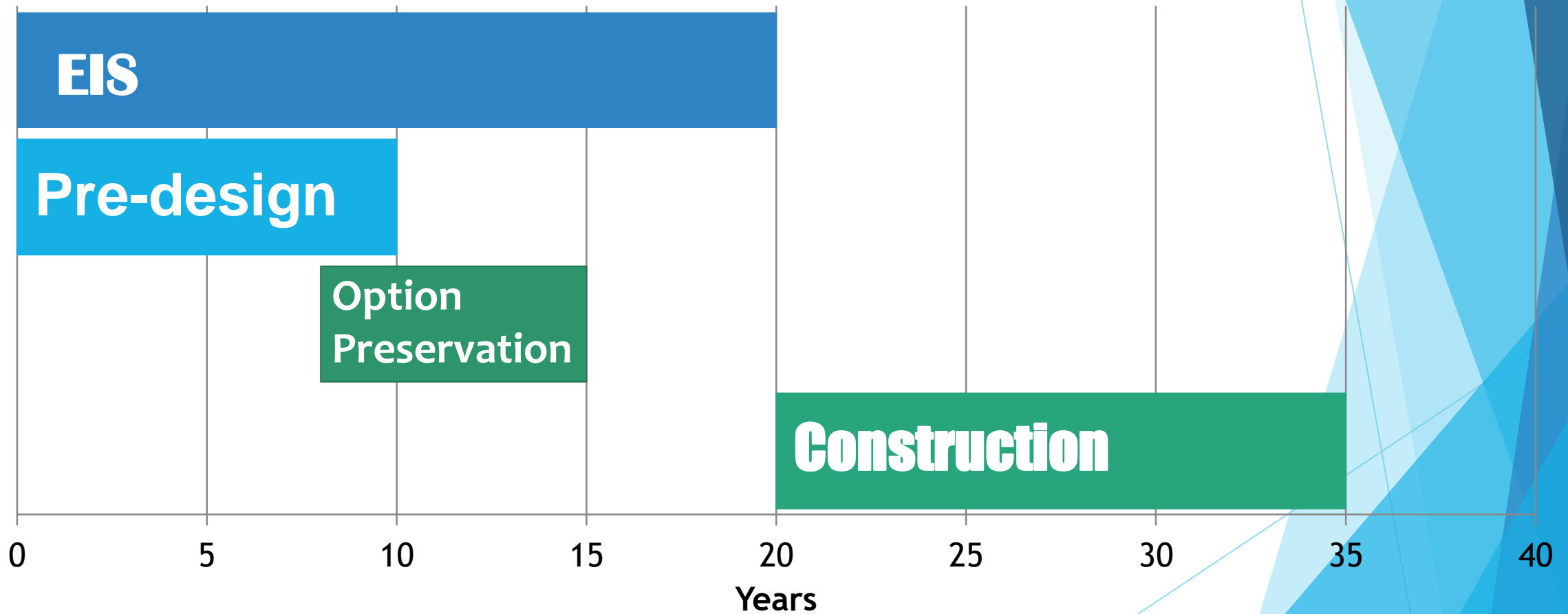
**PROPERTY  
TAXES**



**IMPACT  
FEES**

# Timeline

for Typical Large Water Development Project





# Long-term Planning

## Asset Management Plans

- ▶ Infrastructure inventory
- ▶ Condition assessment
- ▶ Project replacement plan
- ▶ Replacement cost estimates
- ▶ Financial plan





# Is it worth it?

## RETURN ON INVESTMENT



Every water  
sector job supports  
**3.68** other jobs.



**Every \$1** spent on water  
infrastructure **generates \$6**  
in economic returns

# Urban Irrigation

- ▶ 2/3 of household water use is outdoors
- ▶ Secondary Water Supply
  - ▶ Patches throughout state
  - ▶ Largest contiguous system in the US is in Davis/Weber County
  - ▶ Secondary Metering
- ▶ Culinary Water Supply
  - ▶ Mostly metered
  - ▶ Easier pricing mechanisms
- ▶ Conservation programs
- ▶ Landscape expectations





# Envision Utah 2014 poll

- ▶ 74% of Utahns agree that farming and ranching is critical to the state
- ▶ Water for agricultural and food production was ranked as most impactful by both urban and rural Utahns
- ▶ 58% were willing/very willing to not build homes and businesses in high-quality ag lands



Photo Credit: Utah Farm Bureau Federation

# Agricultural Irrigation

- ▶ May use same infrastructure as M&I water (reservoirs, canals, raw water transmission, etc.)
- ▶ As ag land is converted to other uses, water *can* be converted as well
- ▶ Efficiency and optimization
  - ▶ Diversion vs depletion
- ▶ Preserving landowners' rights





